

**ATTACHMENT A**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of:	)	
U.S. Patent No. 6,292,515 to	)	
Chiihsin KAO et al.	)	Group Art Unit: Unassigned
Reissue Serial No.: Unassigned	)	Examiner: Unassigned
Filed: September 18, 2003	)	
For: DUAL MODE BIT AND GAIN	)	
LOADING CIRCUIT AND PROCESS	)	

Commissioner for Patents  
Washington, D.C. 20231

Sir:

**REVOCATION OF POWER OF ATTORNEY  
AND GRANT OF NEW POWER OF ATTORNEY**

The undersigned, a representative authorized to sign on behalf of the assignee owning all of the interest in this patent, hereby revokes all previous powers of attorney or authorizations of agent granted in this application before the date of execution hereof. The undersigned verifies that **REALTEK SEMICONDUCTOR CORPORATION** is the assignee of the entire right, title, and interest in U.S. Patent No. 6,292,515 and the reissue application of U.S. Patent No. 6,292,515 by virtue of an assignment. The assignment of U.S. Patent No. 6,292,515 to **REALTEK SEMICONDUCTOR CORPORATION**, a copy of which provided as Attachment A, was filed in and received by the United States Patent and Trademark Office on September 5, 2003. A copy of the stamped postcard evincing such filing is provided as Attachment B. The undersigned certifies that the evidentiary documents have been reviewed and to the best of the

undersigned's knowledge and belief, title is in the assignee **REALTEK SEMICONDUCTOR CORPORATION**.

The undersigned hereby grants its power of attorney to **FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.**, Douglas B. Henderson, Reg. No. 20,291; Ford F. Farabow, Jr., Reg. No. 20,630; Arthur S. Garrett, Reg. No. 20,338; Donald R. Dunner, Reg. No. 19,073; Brian G. Brunsvold, Reg. No. 22,593; Tipton D. Jennings, IV, Reg. No. 20,645; Jerry D. Voight, Reg. No. 23,020; Laurence R. Hefter, Reg. No. 20,827; Kenneth E. Payne, Reg. No. 23,098; Herbert H. Mintz, Reg. No. 26,691; C. Larry O'Rourke, Reg. No. 26,014; Albert J. Santorelli, Reg. No. 22,610; Michael C. Elmer, Reg. No. 25,857; Richard H. Smith, Reg. No. 20,609; Stephen L. Peterson, Reg. No. 26,325; John M. Romary, Reg. No. 26,331; Bruce C. Zotter, Reg. No. 27,680; Dennis P. O'Reilley, Reg. No. 27,932; Allen M. Sokal, Reg. No. 26,695; Robert D. Bajefsky, Reg. No. 25,387; Richard L. Stroup, Reg. No. 28,478; David W. Hill, Reg. No. 28,220; Thomas L. Irving, Reg. No. 28,619; Charles E. Lipsey, Reg. No. 28,165; Thomas W. Winland, Reg. No. 27,605; Basil J. Lewris, Reg. No. 28,818; Martin I. Fuchs, Reg. No. 28,508; E. Robert Yoches, Reg. No. 30,120; Barry W. Graham, Reg. No. 29,924; Susan Haberman Griffen, Reg. No. 30,907; Richard B. Racine, Reg. No. 30,415; Thomas H. Jenkins, Reg. No. 30,857; Robert E. Converse, Jr., Reg. No. 27,432; Clair X. Mullen, Jr., Reg. No. 20,348; Christopher P. Foley, Reg. No. 31,354; Roger D. Taylor, Reg. No. 28,992; John C. Paul, Reg. No. 30,413; David M. Kelly, Reg. No. 30,953; Kenneth J. Meyers, Reg. No. 25,146; Carol P. Einaudi, Reg. No. 32,220; Walter Y. Boyd, Jr., Reg. No. 31,738; Steven M. Anzalone, Reg. No. 32,095; Jean B. Fordis, Reg. No. 32,984; Barbara C. McCurdy, Reg. No. 32,120; James K.

Reissue Application of  
U.S. Patent No. 6,292,515

Hammond, Reg. No. 31,964; Richard V. Burgujian, Reg. No. 31,744; J. Michael Jakes, Reg. No. 32,824; Thomas W. Banks, Reg. No. 32,719; Christopher P. Isaac, Reg. No. 32,616; Bryan C. Diner, Reg. No. 32,409; M. Paul Barker, Reg. No. 32,013; Andrew Chanhon Sonu, Reg. No. 33,457; David S. Forman, Reg. No. 33,694; Vincent P. Kovalick, Reg. No. 32,867; James W. Edmondson, Reg. No. 33,871; Michael R. McGurk, Reg. No. 32,045; Joann M. Neth, Reg. No. 36,363; Gerson S. Panitch, Reg. No. 33,751; Cheri M. Taylor, Reg. No. 33,216; Charles E. Van Horn, Reg. No. 40,266; Linda A. Wadler, Reg. No. 33,218; Jeffrey A. Berkowitz, Reg. No. 36,743; Michael R. Kelly, Reg. No. 33, 921; James B. Monroe, Reg. No. 33,971; Doris Johnson Hines, Reg. No. 34,629; Lori Ann Johnson, Reg. No. 34,498; R. Bruce Bower, Reg. No. 37,099; John Rissman, Reg. No. 33,764; Therese A. Hendricks, Reg. No. 30,389; Leslie I. Bookoff, Reg. No. 38,084; Michele C. Bosch, Reg. No. 40,524; Michael J. Flibbert, Reg. No. 33,234; Scott A. Herbst, Reg. No. 35,189; Leslie A. McDonell, Reg. No. 34,872; Thalia V. Warnement, Reg. No. 39,064; Ronald A. Bleeker, Reg. No. 27,773; Kathleen A. Daley, Reg. No. 36,116; C. Gregory Gramenopoulos, Reg. No. 36,532; Anthony M. Gutowski, Reg. No. 38,742; Yitai Hu, Reg. No. 40,653; Lionel M. Lavenue; Reg. No. 46,859; Christine E. Lehman, Reg. No. 38,535; Patrick J. Coyne, Reg. No. 31,821; and Sang Hui Michael Kim, Reg. No. 40,450 both jointly and separately as its attorneys with full power of substitution and revocation to transact all business in the Patent and Trademark Office connected with U.S. Patent No. 6,292,515 and the reissue application of U.S. Patent No. 6,292,515.

Reissue Application of  
U.S. Patent No. 6,292,515

Please send all future correspondence concerning this application to Finnegan,  
Henderson, Farabow, Garrett & Dunner, L.L.P. at the following address:

Finnegan, Henderson, Farabow,  
Garrett & Dunner, L.L.P.  
1300 I Street, N.W.  
Washington, D.C. 20005-3315

Date Sep. 17, 2003

Sun-Chien Chiu  
Signature

Chiu Sun-Chien  
Typed or printed name

President  
Title

REALTEK SEMICONDUCTOR  
CORPORATION

Reissue Application of  
U.S. Patent No. 6,292,515

YCH/mrk

PLEASE STAMP TO ACKNOWLEDGE RECEIPT OF THE FOLLOWING:

**MAIL STOP ASSIGNMENT**

In Re Patent Applications and Patents from Real Communications, Inc. to **Realtek Semiconductor Corporation**

- 
1. Recordation Form Cover Sheet, with request to charge \$1,240.00 to deposit account for 13 patent applications and 18 patents to be recorded (2 pages), pages 1-2);
  2. Assignment (4 pages, pages 1-4).
- 

Date: **September 5, 2003**

Docket No.: 8834.0999-00000

MXKim/lp - Mail Drop: Palo Alto, CA



NA  
9/5/03



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

MARCH 23, 1998

PTAS

J. NICHOLAS GROSS  
10950 N. BLANEY AVE.  
SUITE B  
CUPERTINO, CA 95014



\*100631324A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/16/1997

REEL/FRAME: 8939/0973  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

LIU, MING-KANG

DOC DATE: 12/16/1997

ASSIGNOR:

KAO, CHIIHSIN

DOC DATE: 12/16/1997

ASSIGNOR:

CHEN, CHUNTA

DOC DATE: 12/16/1997

ASSIGNEE:

INTEGRATED TECHNOLOGY EXPRESS, INC.  
2710 WALSH AVENUE  
SANTA CLARA, CALIFORNIA 95051

SERIAL NUMBER: 08991810  
PATENT NUMBER:

FILING DATE: 12/16/1997  
ISSUE DATE:

ITE-97010

8939/0973 PAGE 2

PEARLENE FOSTER, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



02-11-1998

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

100631324

JCS26 U.S. PTO  
08/991810

12/16/97

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy them.

## 1. Name(s) of conveying party(ies):

Ming-Kang Liu

Chiihsin Kao

Chunta Chen

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 2. Name and address of receiving party:

Name: Integrated Technology Express, Inc.

Internal Address: 2710 Walsh Avenue  
Santa Clara, CA 95051

## 3. Nature of conveyance:

☒ Assignment ☐ Merger☐ Security Agreement ☐ Change of Name☐ Other:Execution Date: 12/16/97

Street Address:

City:

State:

ZIP:

Additional name(s) & address(es) attached: ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: 12/16/97

## A. Patent Application No.(s)

## B. Patent No.(s)

Additional numbers attached? Yes ☐ No ☒

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: J. Nicholas GrossInternal Address: Suite BStreet Address: 10950 N. Blaney Ave.City: Cupertino State: CA ZIP: 95014

## 6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....40.00..... \$

☒ Enclosed☐ Authorized to be charged to deposit account

Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

## Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Name of Person Signing: J. Nicholas Gross, Reg. No. 34,175  
Date: 12/16/97Signature: J. Nicholas Gross

Total number of pages including cover sheet: 1

Attorney Docket No: ITE 97-010

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

10950 North Blaney Avenue - Suite B - Cupertino, California, 95014 phn: (408) 342-1862 - fax: (408) 342-1861

## ASSIGNMENT

Docket Number : ITE-970 10

Application Number:

Filing Date: 12/16/97

In consideration of One Dollar and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned inventor, or each inventor if more than one, hereby assigns to Integrated Technology Express, Inc. having an address of 2710 Walsh Avenue, Santa Clara, CA 95051, its successors and assigns (hereinafter called "said assignee"), the entire right, title and interest in the invention or improvements of the undersigned disclosed in the above-identified Application entitled Circuit for Configuring and Dynamically Adapting Data and Energy Parameters in a Multi-Channel Communications System, and in said applications and any and all other applications for patent or similar rights in any country, which the undersigned may file, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent or similar rights of the United States or any other country which may be obtained on any of said applications, and in any reissue or extension thereof.

The undersigned hereby authorizes and requests the Commissioner of Patents or other official of other countries to issue said Letters Patent or similar rights to said assignee.

The undersigned hereby authorizes and requests the attorneys of record in said application to insert in this assignment the date and serial number of said application.

For said consideration, the undersigned hereby agrees, upon the request and at the expense of said assignee, to execute any divisional, continuation or substitute application for said invention or improvements, and any oath, declaration or affidavit relating thereto, and any application for the reissue or extension of any Letters Patent or similar rights that may be granted upon said application, and, in the event of any application or Letters Patent or similar rights assigned herein becoming involved in interference or other proceedings relating thereto, to cooperate to the best of the ability of the undersigned in the matters of preparing and executing any preliminary statement or other documents as appropriate, and giving and producing evidence and/or testimony in support thereof. The undersigned agrees to perform, upon request, any affirmative acts to obtain, maintain, issue and enforce said Letters Patent or similar rights of the United States or any other country and vest in said assignee all rights therein, whereby said Letters Patent or similar rights will be held and enjoyed by said assignee, to the full end of the term for which said Letters Patent or similar rights may be granted as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.


The undersigned hereby covenants that the undersigned has not made, will not make, and is not aware of any assignment, sale, agreement or encumbrance of the above referenced invention which would conflict with this assignment.

And for said consideration, the undersigned hereby assigns to said assignee the entire right, title and interest in said invention or improvements in the United States and all foreign countries, including all priority rights under the International Convention, and agrees to execute, at the request of said assignee, all documents in connection with any application for foreign letters patent therefor.

Signature of First Inventor: Chihsin Kao

Name (printed) First Inventor: 122262 - Chihsin Kao

Date of Signature/Execution: 12-16-97

Signature of Second Inventor: 

Name (printed) Second Inventor: CHUN-TA CHEN

Date of Signature/Execution: Dec. 16, '97

Signature of Third Inventor: Ming-Kang Liu

Name (printed) Third Inventor: Ming-Kang Liu

Date of Signature/Execution: Dec 16, 1997

STATE OF \_\_\_\_\_ )  
 ) SS.  
COUNTY OF \_\_\_\_\_ )

Given under my hand and notarial seal this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_.

See ATTACHED  
\_\_\_\_\_  
NOTARY PUBLIC

Docket Number : ITE-97010

**VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS**

**(37 CFR 1.9(f) & 1.27(c))--SMALL BUSINESS CONCERN**

Applicant or Patentee: Integrated Technology Express, Inc.

Application or Patent No.:

Filed: 12/16/97

Title: Circuit for Configuring and Dynamically Adapting Data and Energy Parameters in a Multi-Channel Communications System

I hereby declare that I am:

☐ the owner of the small business concern identified below:

☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN: Integrated Technology Express, Inc.

ADDRESS OF SMALL BUSINESS CONCERN: 2710 Walsh Avenue, Santa Clara, CA 95051

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

☒ the specification filed herewith with title as listed above.

☐ the application identified above.

☐ the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern, or organization having rights in the invention must file separate verified statements averring to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization having any rights in the invention is listed below:

☒ no such person, concern, or organization exists.

☐ each such person, concern, or organization is listed below.

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING

Daniel Chen Daniel Chen

TITLE OF PERSON IF OTHER THAN OWNER

President & CEO

ADDRESS OF PERSON SIGNING

2710 Walsh Ave, Santa Clara, CA 95051

SIGNATURE

Daniel Chen

DATE

12/16/97

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

No. 5193

State of California

County of Santa Clara

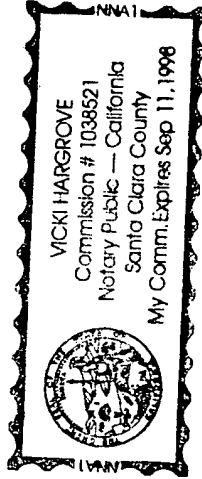
On Dec. 16, 1997 before me, Vicki Hargrove, Notary Public

NAME, TITLE OF OFFICER - E.G., "JANE DOE, NOTARY PUBLIC"

personally appeared CHI-HSIN KAO, CHUNTA CHEN, MING KANG LIA  
NAME(S) OF SIGNER(S)

☐ personally known to me - OR - ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



**OPTIONAL SECTION**

**CAPACITY CLAIMED BY SIGNER**

Though statute does not require the Notary to fill in the data below, doing so may prove invaluable to persons relying on the document.

☒ INDIVIDUAL

☐ CORPORATE OFFICER(S)

TITLE(S)

☐ PARTNER(S) ☐ LIMITED

☐ GENERAL

☐ ATTORNEY-IN-FACT

☐ TRUSTEE(S)

☐ GUARDIAN/CONSERVATOR

☐ OTHER: \_\_\_\_\_

**SIGNER IS REPRESENTING:**

NAME OF PERSON(S) OR ENTITY(IES)

**OPTIONAL SECTION**

THIS CERTIFICATE MUST BE ATTACHED TO THE DOCUMENT DESCRIBED AT RIGHT:

TITLE OR TYPE OF DOCUMENT ITE - 970010

NUMBER OF PAGES \_\_\_\_\_ DATE OF DOCUMENT \_\_\_\_\_

SIGNER(S) OTHER THAN NAMED ABOVE \_\_\_\_\_

Though the data requested here is not required by law, it could prevent fraudulent reattachment of this form.

FORM PTO-1595  
1-31-92

RECORDATION FORM COVER SHEET  
PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office  
Attorney Docket No. 08834.0999  
Attorney Customer Number: 22,852

To the Honorable Commissioner of Patents and Trademarks:  
Please record the attached original documents or copy them for.

ATTN. BOX ASSIGNMENTS

1. Name of conveying party(ies):  
Real Communications, Inc.

2. Name and address of receiving party(ies):

Name: Realtek Semiconductor Corporation

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

Internal Address: Science-Based Industrial Park

3. Nature of conveyance:

Street Address: No. 2, Industry E. Rd. IX

☒ Assignment ☐ Merger

City: Hsinchu

☐ Security Agreement ☐ Change of Name

Country: Taiwan,  
R.O.C.

☐ Other:

Additional name(s) & Address(es) attached?

Execution Date: September 2, 2003

☐ Yes ☒ No

4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application:

A. Patent Application Number(s):

09/797,633	09/798,113
09/798,133	09/797,755
09/797,634	09/797,648
09/797,789	09/741,748
09/797,778	09/191,147
09/797,793	
09/797,782	
09/798,054	

B. Patent Number(s):

6,065,060	6,128,348
6,073,179	6,130,879
6,075,821	6,222,888
6,081,517	6,252,900
6,084,906	6,279,022
6,084,917	6,292,515
6,092,122	6,349,096
6,094,459	6,424,925
6,128,335	6,442,195

Additional numbers attached?

☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Sang Hui Michael Kim

6. Total number of applications and registrations involved:  
31

7. Total fee (37 CFR 3.41): \$1,240.00

☐ Enclosed (Please charge deficiency to deposit account)

☒ Authorized to be charged to deposit account

Internal Address: FINNEGAN, HENDERSON, FARABOW, GARRETT &  
DUNNER, L.L.P.

Street Address: 1300 I Street, N.W.

City: Washington, D.C.

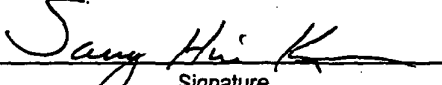
State: Zip: 20005-3315

8. Deposit Account No.: 06-0916

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Sang Hui Michael Kim  
Reg. No. 40,450

  
Signature

September 4, 2003  
Date

Total number of pages including cover sheet, attachments and documents: 6

## ASSIGNMENT

WHEREAS, REAL COMMUNICATIONS, INC., hereinafter referred to as "ASSIGNOR", a corporation organized under the laws of the State of California, is the sole and exclusive owner, by assignment, of the United States Letters Patent and the United States patent applications listed on attached Schedule A;

and

WHEREAS, REALTEK SEMICONDUCTOR CORPORATION, hereinafter referred to as "ASSIGNEE", a corporation of Taiwan, R. O. C., whose post office address is No. 2, Industry E. Rd. IX, Science-Based Industrial Park, Hsinchu, Taiwan, R. O. C. is desirous of acquiring the entire right, title, and interest in, to and under said United States Letters Patent and said United States patent applications and the United States Letters Patent to be issued upon these applications and the inventions covered thereby;

NOW THEREFORE, be it known that, for good and valuable consideration, the receipt of which from Assignee is hereby acknowledged, Assignor, has sold, assigned, transferred, and set over, and does hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, its entire right, title, and interest in and to these inventions, these United States Letters Patents and these United States patent applications, all divisions, and continuations thereof, and all United States Letters Patent which may be granted thereon, and all reissues thereof; and Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States to issue all Letters Patent for these inventions and these United States patent applications to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, ASSIGNOR HEREBY further covenants and agrees that it will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to it respecting these inventions, this United States Letters Patent and these United States patent applications, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to these inventions, this United States Letters Patent, and these United States patent applications, in said Assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for these inventions, this United States Letters Patent and these United States patent applications, in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.



IN TESTIMONY WHEREOF, REAL COMMUNICATIONS, INC. has caused these presents to be signed by its duly authorized officer.

Signature:

Chin Chen

Typed Name:

Chin Chen

Title:

Secretary and Chief Financial Officer

Date:

9/2/03

## SCHEDULE A

U.S. Patent Applications

<u>Application Number</u>	<u>Former Docket No.</u>	<u>Current Docket No.</u>
09/797,633	ITEX 2001-1	8834.0017
09/798,133	ITEX 2001-7	8834.0009
09/797,634	ITEX 2001-11	8834.0013
09/797,789	ITEX 2001-2	8834.0014
09/797,778	ITEX 2001-3	8834.0015
09/797,793	ITEX 2001-4	8834.0016
09/797,782	ITEX 2001-5	8834.0007
09/798,054	ITEX 2001-6	8834.0008
09/798,113	ITEX 2001-10	8834.0012
09/797,755	ITEX 2001-8	8834.0010
09/797,648	ITEX 2001-9	8834.0011
09/741,748	ITEX 97-001C	8834.0033-01
09/191,147	ITEX 98-004	8834.0036

**U.S. Patents**

<b><u>Patent Number</u></b>	<b><u>Former Docket No.</u></b>	<b><u>Current Docket No.</u></b>
6,065,060	ITEX 97-004	8834.0019
6,073,179	ITEX 97-006	8834.0020
6,075,821	ITEX 97-011	8834.0024
6,081,517	ITEX 97-014	8834.0035
6,084,906	ITEX 97-012	8834.0026
6,084,917	ITEX 97-010	8834.0023
6,092,122	ITEX 97-002	8834.0032
6,094,459	ITEX 97-008	8834.0021
6,128,335	ITEX 97-003	8834.0027
6,128,348	ITEX 97-009	8834.0022
6,130,879	ITEX 97-015	8834.0018
6,222,888	ITEX 2000-02	8834.0030
6,252,900	ITEX 97-001	8834.0033
6,279,022	ITEX 98-002	8834.0029
6,292,515	ITEX 2000-01	8834.0031
6,349,096	ITEX 97-013	8834.0025
6,424,925	M 7782 US	8834.0034
6,442,195	ITEX 97-016	8834.0028

**ATTACHMENT B**

PATENT  
Customer No. 22,852  
Attorney Docket No. 08834.0038

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of:	)	
U.S. Patent No. 6,292,515 to	)	
	)	
Chiihsin KAO et al.	)	Group Art Unit: Unassigned
	)	
Reissue Serial No.: Unassigned	)	Examiner: Unassigned
	)	
Filed: September 18, 2003	)	
	)	
For: DUAL MODE BIT AND GAIN	)	
LOADING CIRCUIT AND PROCESS	)	

**BOX REISSUE**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

**CONSENT OF ASSIGNEE,**  
**OFFER TO SURRENDER ORIGINAL PATENT,**  
**AND STATEMENT UNDER 37 C.F.R. § 3.73(b)**

U.S. Patent No. 6,292,515 is assigned to **Realtek Semiconductor Corporation** as assignee of the entire right, title, and interest in the patent by three separate assignments. The first assignment, a copy of which provided as Attachment A, assigned the inventors' entire right, title, and interest in the parent application of the patent and its continuation applications to Integrated Telecom Express, Inc. and was recorded at Reel 8939, Frame 0973 on December 16, 1997. The second assignment, a copy of which provided as Attachment B, assigned Integrated Telecom Express, Inc.'s entire right, title, and interest in the patent to Real Communications,

Inc. The second assignment was filed in and received by the United States Patent and Trademark Office on July 16, 2003, a copy of the stamped postcard evincing such filing is provided as Attachment C. The third assignment, a copy of which is provided as Attachment D, assigned Real Communications, Inc.'s entire right, title, and interest in the application of the patent to Realtek Semiconductor Corporation. The third assignment was filed in and received by the United States Patent and Trademark Office on September 5, 2003, a copy of the stamped postcard evincing such filing is provided as Attachment E.

Realtek Semiconductor Corporation hereby consents to the filing of the accompanying application for the reissue of U.S. Patent 6,292,515.

Realtek Semiconductor Corporation hereby also offers to surrender U.S. Patent 6,292,515 when the reissue application is otherwise in condition for allowance.

The undersigned, whose title is supplied below, is empowered to sign this document on behalf of the assignee, Realtek Semiconductor Corporation.

Reissue Application of  
U.S. Patent No. 6,292,515

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Sep. 17, 2003  
Date

Sun-Chien Chiu  
Signature

Chiu Sun-Chien  
Typed or printed name

President  
Title

REALTEK SEMICONDUCTOR  
CORPORATION

Reissue Application of  
U.S. Patent No. 6,292,515

**ATTACHMENT B**



PATENT  
Customer No. 22,852  
Attorney Docket No.: 8834.0031

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Chihsin KAO et al. ) U.S. Patent 6,292,515 B1  
Application No.: 09/510,578 ) Issued: September 18, 2001  
Filed: February 22, 2000 )  
For: DUAL MODE BIT AND GAIN )  
LOADING CIRCUIT AND PROCESS )

Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

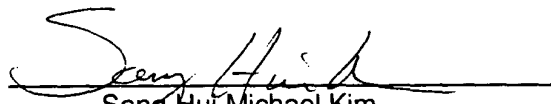
**COPY OF FILED RECORDATION OF ASSIGNMENT**

We enclose a copy of the filed Recordation of Assignment from Integrated Telecom  
Express, Inc. to Real Communications, Inc. regarding the above-identified application.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Date: July 16, 2003

  
Sang Hui Michael Kim  
Reg. No. 40,450

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP  
1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
www.finnegan.com

To the Honorable Commissioner of Patents and Trademarks:  
Please record the attached original documents or copy thereof.

ATTN. BOX ASSIGNMENTS

1. Name of conveying party(ies):  
Integrated Telecom Express, Inc.

2. Name and address of receiving party(ies):

Name: Real Communications, Inc.

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

Internal Address: Suite 412

3. Nature of conveyance:

Street Address: 1900 McCarthy Blvd.

☒ Assignment ☐ Merger

City: Milpitas

☐ Security Agreement ☐ Change of Name

State: California Zip Code: 95035

☐ Other:

Additional name(s) &amp; Address(es) attached?

Execution Date: June 23, 2003

☐ Yes ☒ No

4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application:

A. Patent Application Number(s):

09/797,633	09/798,113
09/798,133	09/797,755
09/797,634	09/797,648
09/797,789	09/741,748
09/797,778	09/191,147
09/797,793	
09/797,782	
09/798,054	

B. Patent Number(s):

6,065,060	6,128,348
6,073,179	6,130,879
6,075,821	6,222,888
6,081,517	6,252,900
6,084,906	6,279,022
6,084,917	6,292,515
6,092,122	6,349,096
6,094,459	6,424,925
6,128,335	6,442,195

Additional numbers attached?

☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Sang Hui Michael Kim

6. Total number of applications and registrations involved:  
31

Internal Address: FINNEGAN, HENDERSON, FARABOW, GARRETT &amp; DUNNER, L.L.P.

Street Address: 1300 I Street, N.W.

City: Washington, D.C.

State: Zip: 20005-3315

7. Total fee (37 CFR 3.41): \$1,240.00

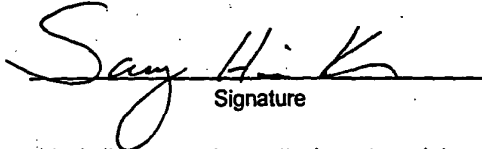
- ☐ Enclosed (Please charge deficiency to deposit account)
- ☒ Authorized to be charged to deposit account

8. Deposit Account No.: 06-0916

9. Stat ment and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Sang Hui Michael Kim  
Reg. No. 40,450

  
Signature

July 16, 2003

Date

Total number of pages including cover sheet, attachments and documents: 6

## INTELLECTUAL PROPERTY ASSIGNMENT

This Intellectual Property Assignment (this "Assignment") is made as of 6/23, 2003 by Integrated Telecom Express, Inc., a Delaware corporation ("Assignor"), to Real Communications, Inc., a corporation organized under the laws of the State of California ("Assignee").

### RECITALS

A. Assignor owns the patents issued by the United States Patent and Trademark Office and certain foreign patent and trademark offices, as well as patent applications filed with the United States Patent and Trademark Office and certain foreign patent and trademark offices, as set forth on Schedule A hereto (the "Patents").

B. Pursuant to a Purchase Agreement between Assignor and Assignee, Assignor desires to assign to Assignee all of Assignor's right, title and interest in and to the Patents.

### ASSIGNMENT

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants and agreements contained in the Purchase Agreement and the covenants and agreements in this Assignment and to induce Assignee to consummate the transactions contemplated by the Purchase Agreement, Assignor agrees as follows:

1. Assignor does hereby sell, transfer, convey, assign and deliver to Assignee all of Assignor's right, title and interest in and to the Patents (and regarding Patents that are patent applications, any patents that may issue therefrom), including any foreign counterparts, divisions, continuations or reissues thereof, the same to be held by Assignee for Assignee's own use and enjoyment, and for the use and enjoyment of Assignee's successors, assigns and other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor if this Assignment and sale had not been made; together with all claims for damages by reason of past infringements of the Patents, along with the right to sue for and collect such damages for the use and benefit of Assignee and its successors, assigns and other legal representatives.

2. Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any officer of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of intellectual property protection or applications as aforesaid, to issue the same to Assignee and its successors, assigns and other legal representatives in accordance with the terms of this instrument.

IN WITNESS WHEREOF, Assignor has executed this Assignment on the date first above written.

ITeX

By: [Signature]

Name: James Williams

Title: Chief Financial Officer

## SCHEDULE A

### PATENTS

Title	Issue Date	Patent Number	Inventor
Modular multiplicative data rate modem and method of operation	5/16/00	6,065,060	Liu, et al.
Program for controlling DMT based modem using sub-channel selection to achieve scaleable data rate based on available signal processing resources	6/6/00	6,073,179	Liu, et al.
Method of configuring and dynamically adapting data and energy parameters in a multi-channel communications system	6/13/00	6,075,821	Kao, et al.
Digital subscriber loop access circuit for digital switch and packet network interconnections	6/27/00	6,081,517	Liu, et al.
ADSL transceiver implemented with associated bit and energy loading integrated circuit	7/4/00	6,084,906	Kao, et al.
Circuit for configuring and dynamically adapting data and energy parameters in a multi-channel communications system	7/4/00	6,084,917	Kao, et al.
xDSL DMT modem using sub-channel selection to achieve scaleable data rate based on available signal processing resources	7/18/00	6,092,122	Liu, et al.
Circuit for configuring data and energy parameters in a multi-channel communications system	7/25/00	6,094,459	Kao, et al.
Software rate adaptable modem with forward compatible and expandable functionality and method of operation	10/3/00	6,128,335	Liu, et al.
Method for configuring data and energy parameters in a multi-channel communications system	10/3/00	6,128,348	Kao, et al.
Access and setup process for end-to-end data and analog voice connections	10/10/00	6,130,879	Liu
Method and circuit for controlling setup of multichannel system	4/24/01	6,222,888	Kao, et al.
Forward compatible and expandable high speed communications system and method of operation	6/26/01	6,252,900	Liu, et al.
System and method for detecting symbol boundary in multi-carrier transmission systems	8/21/01	6,279,022	Miao, et al.
Dual mode bit and gain loading circuit and process	9/18/01	6,292,515	Kao, et al.
Configurable digital subscriber loop access and end-to-end data and analog voice connection system	2/19/02	6,349,096	Liu, et al.
Circuit and Method for Detecting a Tone Signal	7/23/2002	6,424,925	Ku, et al.
Multiple Low Speed Sigma-Delta Analog Front Ends for Full Implementation of High-Speed Data Link Protocol	8/27/2002	6,442,195	Liu, et al.

### PATENT APPLICATIONS

Description	Open date	Patent Application Serial Number	Inventor
Scaleable Architecture for Multiple-Port	3/1/2001	09797633	Liu, Ming-Kang

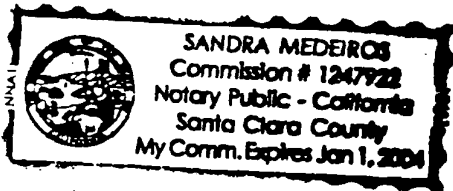
Physical Medium Dependent Sub-System	3/1/2001	09798113	Liu, Ming-Kang
Transport Convergence Sub-System	3/1/2001	09797634	Liu, Ming-Kang
Scaleable Architecture for Multiple-Port	3/1/2001	106809	Liu, Ming-Kang
System and Method for Internal Operation	3/1/2001	09797789	Liu, Ming-Kang
xDSL Communications Systems Using	3/1/2001	09797778	Liu, Ming-Kang
Mixed Hardware/Software Architecture	3/1/2001	09797793	Liu, Ming-Kang
xDSL Symbol Processor & Method	3/1/2001	09797782	Liu, Ming-Kang
Logical Pipeline for Data Communications System	3/1/2001	09798054	Liu, Ming-Kang
xDSL Function ASIC Processor & Method of Operation	3/1/2001	09798133	Liu, Ming-Kang
Data Object Architecture and Method for xDSL	3/1/2001	09797755	Liu, Ming-Kang
Programmable Task Scheduler	3/1/2001	09797648	Liu, Ming-Kang
Forward Compatible & Expandable High-Speed	12/19/2000	09741748	Liu, Young Way; et al.
System and Method for Configuring Time Domain...	11/13/1998	09191147	
Tone Detect	8/30/00	PCT/US00/23955	

Acknowledgment by Notary Public

State of California  
County of Santa Clara

On this 23 day of June, 2003 before me, the undersigned Notary Public, personally appeared James Williams, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he or she executed the same.

Seal:



Signature: \_\_\_\_\_

Name: Sandra Medeiros, Notary Public

## **ATTACHMENT C**



YCA-MXX

**PLEASE STAMP TO ACKNOWLEDGE RECEIPT OF THE FOLLOWING:**

In Re Application of: Chiihsin KAO et al.

Application No.: 09/510,578

U.S. Patent No. 6,292,515 B1

Filed: February 22, 2000

Issued: September 18, 2001

For: DUAL MODE BIT AND GAIN LOADING CIRCUIT AND PROCESS

- 
1. SUBMISSION OF REVOCATION OF POWER OF ATTORNEY AND GRANT OF NEW POWER OF ATTORNEY AND CHANGE OF CUSTOMER NUMBER AND CORRESPONDENCE ADDRESS (2 pages, pages 1-2);
  2. COPY OF REVOCATION OF POWER OF ATTORNEY AND GRANT OF NEW POWER OF ATTORNEY (4 pages, pages 1-4), INCLUDING SCHEDULE A (2 pages, pages 1-2); and
  3. COPY OF RECORDATION OF ASSIGNMENT (2 pages, pages 1-2) AND ASSIGNMENT (4 pages, pages 1-4).
- 

Date: July 16, 2003

Docket No.: 8834.0031

MXKim/lp - Mail Drop: Palo Alto, CA



DK 12P  
7-17-07

**ATTACHMENT D**

FORM PTO-1595  
1-31-92

RECORDATION FORM COVER SHEET  
PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office  
Attorney Docket No. 08834.0999  
Attorney Customer Number: 22,852

To the Honorable Commissioner of Patents and Trademarks:  
Please record the attached original documents and copy thereof.

ATTN. BOX ASSIGNMENTS

1. Name of conveying party(ies):  
Real Communications, Inc.

2. Name and address of receiving party(ies):

Name: Realtek Semiconductor Corporation

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

Internal Address: Science-Based Industrial Park

3. Nature of conveyance:

Street Address: No. 2, Industry E. Rd. IX

☒ Assignment ☐ Merger

City: Hsinchu

☐ Security Agreement ☐ Change of Name

Country: Taiwan,  
R.O.C.

☐ Other:

Additional name(s) & Address(es) attached?

Execution Date: September 2, 2003

☐ Yes ☒ No

4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application:

A. Patent Application Number(s):

09/797,633	09/798,113
09/798,133	09/797,755
09/797,634	09/797,648
09/797,789	09/741,748
09/797,778	09/191,147
09/797,793	
09/797,782	
09/798,054	

B. Patent Number(s):

6,065,060	6,128,348
6,073,179	6,130,879
6,075,821	6,222,888
6,081,517	6,252,900
6,084,906	6,279,022
6,084,917	6,292,515
6,092,122	6,349,096
6,094,459	6,424,925
6,128,335	6,442,195

Additional numbers attached?

☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Sang Hui Michael Kim

6. Total number of applications and registrations involved:  
31

7. Total fee (37 CFR 3.41): \$1,240.00

- ☐ Enclosed (Please charge deficiency to deposit account)
- ☒ Authorized to be charged to deposit account

Internal Address: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

Street Address: 1300 I Street, N.W.

City: Washington, D.C.

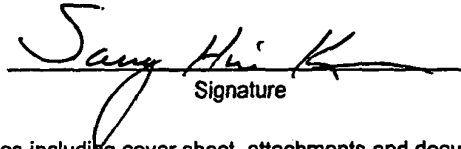
State: Zip: 20005-3315

8. Deposit Account No.: 06-0916

9. Statement and signature .

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Sang Hui Michael Kim  
Reg. No. 40,450

  
Signature

September 4, 2003  
Date

Total number of pages including cover sheet, attachments and documents: 6

## ASSIGNMENT

WHEREAS, REAL COMMUNICATIONS, INC., hereinafter referred to as "ASSIGNOR", a corporation organized under the laws of the State of California, is the sole and exclusive owner, by assignment, of the United States Letters Patent and the United States patent applications listed on attached Schedule A;

and

WHEREAS, REALTEK SEMICONDUCTOR CORPORATION, hereinafter referred to as "ASSIGNEE", a corporation of Taiwan, R. O. C., whose post office address is No. 2, Industry E. Rd. IX, Science-Based Industrial Park, Hsinchu, Taiwan, R. O. C. is desirous of acquiring the entire right, title, and interest in, to and under said United States Letters Patent and said United States patent applications and the United States Letters Patent to be issued upon these applications and the inventions covered thereby;

NOW THEREFORE, be it known that, for good and valuable consideration, the receipt of which from Assignee is hereby acknowledged, Assignor, has sold, assigned, transferred, and set over, and does hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, its entire right, title, and interest in and to these inventions, these United States Letters Patents and these United States patent applications, all divisions, and continuations thereof, and all United States Letters Patent which may be granted thereon, and all reissues thereof; and Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States to issue all Letters Patent for these inventions and these United States patent applications to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, ASSIGNOR HEREBY further covenants and agrees that it will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to it respecting these inventions, this United States Letters Patent and these United States patent applications, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to these inventions, this United States Letters Patent, and these United States patent applications, in said Assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for these inventions, this United States Letters Patent and these United States patent applications, in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

IN TESTIMONY WHEREOF, REAL COMMUNICATIONS, INC. has caused these presents to be signed by its duly authorized officer.

Signature: Chin Chen  
Typed Name: Chin Chen  
Title: Secretary and Chief Financial Officer  
Date: 9/2/03

## SCHEDULE A

U.S. Patent Applications

<u>Application Number</u>	<u>Former Docket No.</u>	<u>Current Docket No.</u>
09/797,633	ITEX 2001-1	8834.0017
09/798,133	ITEX 2001-7	8834.0009
09/797,634	ITEX 2001-11	8834.0013
09/797,789	ITEX 2001-2	8834.0014
09/797,778	ITEX 2001-3	8834.0015
09/797,793	ITEX 2001-4	8834.0016
09/797,782	ITEX 2001-5	8834.0007
09/798,054	ITEX 2001-6	8834.0008
09/798,113	ITEX 2001-10	8834.0012
09/797,755	ITEX 2001-8	8834.0010
09/797,648	ITEX 2001-9	8834.0011
09/741,748	ITEX 97-001C	8834.0033-01
09/191,147	ITEX 98-004	8834.0036

U.S. Patents

<u>Patent Number</u>	<u>Former Docket No.</u>	<u>Current Docket No.</u>
6,065,060	ITEX 97-004	8834.0019
6,073,179	ITEX 97-006	8834.0020
6,075,821	ITEX 97-011	8834.0024
6,081,517	ITEX 97-014	8834.0035
6,084,906	ITEX 97-012	8834.0026
6,084,917	ITEX 97-010	8834.0023
6,092,122	ITEX 97-002	8834.0032
6,094,459	ITEX 97-008	8834.0021
6,128,335	ITEX 97-003	8834.0027
6,128,348	ITEX 97-009	8834.0022
6,130,879	ITEX 97-015	8834.0018
6,222,888	ITEX 2000-02	8834.0030
6,252,900	ITEX 97-001	8834.0033
6,279,022	ITEX 98-002	8834..0029
6,292,515	ITEX 2000-01	8834.0031
6,349,096	ITEX 97-013	8834.0025
6,424,925	M 7782 US	8834.0034
6,442,195	ITEX 97-016	8834.0028



**ATTACHMENT E**

YCH/mrk

PLEASE STAMP TO ACKNOWLEDGE RECEIPT OF THE FOLLOWING:

**MAIL STOP ASSIGNMENT**

In Re Patent Applications and Patents from Real Communications, Inc. to **Realtek Semiconductor Corporation**

1. Recordation Form Cover Sheet, with request to charge \$1,240.00 to deposit account for 13 patent applications and 18 patents to be recorded (2 pages), pages 1-2;
2. Assignment (4 pages, pages 1-4).

Date: **September 5, 2003**

Docket No.: 8834.0999-00000

MXKim/lp - Mail Drop: Palo Alto, CA



NA  
9/5/03